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MINISTRY OF FOOD

FOOD CONSUMPTION LEVELS IN UNITED KINGDOM

Presented by the Minister of Food to Parliament
by Command of His Majesty
December 1949

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FOOD CONSUMPTION LEVELS IN UNITED KINGDOM

1. In " Food Consumption Levels in the United Kingdom " (Cmd. 7203) published in August 1947, the data provided brought the record of food consumption statistics up to the year 1946-47 for which provisional figures were given. The present statement carries the series up to the end of June, 1949.

2. As in Cmd. 7203 the method used by the Ministry of Food in calculating the national average level of food consumption is that devised and used by the Special Joint Committee of experts which was set up by the Combined Food Board early in 1943 and which presented its first report " Food Consumption Levels in the United States, Canada, and the United Kingdom " in November of that year.(¹) The methods described in that report have been used in continuing the series and all the data previously presented are comparable with those given in the tables. Since they were first published certain of the earlier figures have been revised but such revisions are of a minor character.

3. In the period 1946-48 the calorie(²) level was relatively stable, but the year 1948-49 shows a rise of just over 3 per cent. The change in the composition of the national diet so far as its energy value is concerned since 1946 may be summed up by saying that the rise in the consumption of butter, margarine, lard and sugar, has made good the loss of calories resulting from a reduced meat consumption.

4. Details of the consumption per head are shown by individual foods and in food groups in Tables I and II. The daily nutrient intakes provided by these supplies are given in Table III.

5. These tables show that in 1948-49 the consumption of fats was nearly 20 per cent. above the level of 1946, the first post-war year, butter being at the highest level since 1940. Sugar stood at the highest level since before the war. In the dairy products group, which as a whole showed a slight improvement compared with the figures for 1946, consumption of liquid milk rose by about 7 per cent. Compared with the pre-war level, consumption of liquid milk shows an increase of 55 per cent., and consumption of dairy products as a whole, an increase of 30 per cent. The fall in the consumption of cheese was due to the reduction of dollar imports.

6. The annual average consumption of meat per head fell from 90 lb. in 1946, to just under 70 lb. in 1948-49. The fall in imports of bacon and canned meat, due to supply difficulties in Canada and Argentina respectively, contributed heavily to the decrease.

7. Fish consumption is still substantially higher than the low war-time level and is now running at 25 per cent. above the pre-war rate. It has helped considerably to maintain supplies of animal protein of which it is a valuable source. The consumption of shell eggs in 1948-49 reached the highest level since 1940. In terms of shell egg equivalent, the group as a whole (shell eggs, dried and processed eggs) attained a level only 8 per cent. below 1934-38.

8. Fruit and fruit products are considerably above their 1946 level and are only about 10 per cent. below the pre-war consumption. Citrus fruit consumption suffered somewhat in 1948-49 from the disturbance in Palestine, and dried fruit from the dollar shortage. The disappointing potato crop of 1947-48 brought about a reduction in consumption from 284 lb. in 1947 to

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(¹) Two further reports covering the three countries have been issued by the United States Department of Agriculture, Washington, D.C. 1944 and 1946. Cmd. 7203 dealt with consumption levels in the United Kingdom only.

(²) " Calorie " throughout this report means Kilo-calorie.

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242 lb. per head in 1948. This was the first substantial reversal of the upward trend of potato consumption which began in 1941 and was in part responsible for the rise to over 230 lb. per head in 1948 in flour consumption, which, after reaching a peak of 241 lb. in 1945, declined to just over 220 lb. in 1946 and 1947.

9. The main nutrients, protein, fats and carbohydrates, and the energy value of the diet (calories) when expressed as percentages of pre-war intake are shown in Table A below:—

Table A. Civilian intake per head per day

Pre-war annual average = 100

	1940	1941	1942	1943	1944	1945	1946	1947	1948	1948/9
Calories	93	94	96	95	100	98	96	96	96	99
Protein—Animal...	90	84	94	93	97	99	104	101	96	95
Vegetable	109	126	124	122	123	127	124	128	125	128
Total ...	98	103	108	107	109	112	113	114	109	110
Fats(1) from all sources... ...	93	87	91	89	95	89	86	81	83	84
Carbohydrates ...	93	97	96	98	102	102	100	104	105	108

10. The following table shows the percentage contribution of the main food groups to the calorie intake in 1945-1948/49 compared with the pre-war period:—

Table B. Percentage of total calorie intake derived from certain groups of foods

	Pre-war	1945	1946	1947	1948	1948/9
Dairy products (excluding butter)	9	11	11	11	11	11
Meat (including canned meat and bacon)	17	13	13	12	11	10
Oils and fats (including butter) ...	17	14	14	13	15	15
Sugar and syrups	15	11	12	13	13	14
Potatoes	4	6	7	7	6	6
Grain products	30	38	35	36	37	36
Other foods	8	7	8	8	7	8
Total	100	100	100	100	100	100

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(1) In the nutrient tables the term " fats " relates to fats from all sources, i.e., fats obtained as such (visible fats—butter, margarine, lard and compound cooking fat and edible oils) and also fats obtained in other foods (e.g., fat in oatmeal, milk and fish).

Table I

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
I. *Dairy Products* (excluding butter)—											
Liquid milk	216·9	233·3	265·0	283·7	298·6	308·0	314·0	312·7	304·3	323·4	336·7
Cream 40 per cent.	1·3	0·5	—	—	—	—	—	—	—	—	—
Cheese	8·8	8·2	8·3	14·0	11·5	10·3	9·7	10·0	9·3	8·3	8·4
Evaporated milk (1)	2·4	1·2	3·6	3·0	1·7	1·6	1·8	4·3	3·8	2·5	2·5
Condensed milk (2)	4·0	3·2	0·7	1·1	1·4	1·0	1·0	1·0	1·1	1·4	1·9
Condensed milk (3)	5·9	3·6	1·2	1·1	1·8	1·6	1·5	1·4	1·2	1·1	1·6
Dried whole milk	0·6	0·5	0·4	0·6	0·8	1·0	1·1	1·3	1·6	1·5	1·3
Dried skim milk	1·0	1·1	0·4	2·3	3·4	2·1	2·4	1·0	1·7	0·5	0·4
Total (as milk solids)	38·3	38·2	40·7	48·6	50·0	49·0	49·8	49·4	48·7	49·0	50·6
As percentage of pre-war	—	100	106	127	131	128	130	129	127	128	132
II. *Meat*—											
Beef—bone in	53·0	45·8	36·3	24·6	23·5	27·3	29·3	33·1	31·9	33·5	32·4
Beef—bone out	1·7	2·2	7·0	15·6	9·4	9·2	3·5	10·2	10·1	5·4	3·8
Mutton and lamb	25·2	30·1	21·6	24·1	26·2	22·4	25·6	24·3	24·2	22·8	21·1
Pork	11·5	9·8	6·8	4·9	7·4	14·8	11·2	3·3	1·0	1·1	1·4
Offals	7·4	7·1	6·1	5·5	5·6	6·8	5·6	5·6	5·4	5·6	5·3
Canned corned meat	2·1	...	0·4	2·4	3·3	0·1	3·5	6·4	6·7	3·8	4·0
Other canned meat	0·8	1·1	2·0	5·0	4·6	5·8	4·9	7·3	4·9	2·2	2·4
Bacon and ham	27·3	20·2	19·1	19·4	18·5	23·6	16·8	15·1	10·1	10·9	10·5
Total (edible weight)	109·6	98·8	85·6	89·6	86·4	96·1	86·6	89·9	82·0	73·8	69·8
As percentage of pre-war	—	90	78	82	79	88	79	82	75	67	64

(1) Full cream unsweetened. (2) Full cream sweetened. (3) Machine skimmed sweetened. ... Negligible.

Table I (contd.)

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
III. *Fish, Poultry and Game*											
Poultry	4·5	3·9	3·9	3·7	3·3	3·0	2·9	3·0	4·0	4·3	4·5
Game and rabbits...	3·7	3·6	2·2	1·5	1·3	1·4	1·4	1·5	1·9	2·5	2·9
Fish (fresh, frozen and cured)	21·8	11·1	11·3	13·1	14·2	16·0	20·2	26·5	27·9	29·0	27·3
Shell fish	1·3	0·8	0·8	0·8	1·0	1·0	1·0	0·9	0·9	1·0	1·0
Canned fish	3·6	5·2	3·4	2·8	3·1	3·3	3·4	3·6	3·0	2·0	1·6
Total (edible weight)	32·8	22·7	20·0	20·5	21·6	23·5	27·8	34·3	36·3	37·0	35·4
As percentage of pre-war	—	69	61	63	66	72	85	105	111	113	108
IV. *Eggs*											
Shell egg	21·3	18·9	16·6	12·0	9·8	9·8	12·3	13·3	13·4	16·2	17·8
Dried egg	...	0·1	0·1	1·9	2·6	2·8	3·0	1·9	1·4	0·9	0·9
Liquid egg	1·9	2·4	1·5	0·3	0·2	0·5	—	0·1	0·9	0·8	
Total (shell egg equivalent)	24·0	22·4	19·2	21·0	22·1	23·2	26·1	21·9	20·9	21·4	22·0
As percentage of pre-war	—	93	80	88	92	97	109	91	87	89	92
V. *Oils and Fats* (*visible*) (¹)											
Butter	24·8	14·0	10·2	7·7	7·6	7·7	8·5	10·9	11·2	12·5	12·5
Margarine ...	8·7	15·4	17·5	17·4	17·0	17·8	17·1	15·1	14·9	17·5	18·0
Lard and compound lard	9·3	9·1	10·0	11·9	11·8	12·1	10·1	8·0	7·4	7·9	9·5
Other edible oils and fats	8·2	7·5	6·7	6·6	5·5	5·5	5·3	4·9	4·6	5·0	5·5
Total (fat content)	45·3	41·2	39·9	39·6	37·9	39·0	37·0	34·7	33·9	38·1	40·6
As percentage of pre-war	—	91	88	87	84	86	82	77	75	84	90

(¹) See footnote to Table A. ... Negligible.

Table I (contd.)

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
VI. *Sugar and Syrups*											
Sugar (total civilian consumption)	103·9(1)	71·8	67·4	69·2	67·7	71·4	70·5	75·6	79·8	81·1	86·1
Jam and marmalade (imported) (2)	0·1	...	0·3	—	2·0	2·1	1·0	0·9	2·7	2·5	2·6
Honey	0·4	0·4	0·3	0·4	0·2	0·4	0·4	0·3	0·6	0·6	0·7
Glucose	6·8	6·7	3·8	3·2	3·0	3·1	3·3	3·1	3·5	3·2	3·4
Total (sugar content)	109·9	77·6	70·9	72·1	71·6	75·7	74·1	79·1	85·0	85·9	91·2
As percentage of pre-war	—	71	65	66	65	69	67	72	77	78	83
VII. *Potatoes*	176·0	166·4	188·2	224·9	248·8	274·6	260·2	282·0	284·1	242·1	266·3
As percentage of pre-war	—	95	107	128	141	156	148	160	161	138	151
VIII. *Pulses and Nuts*											
Dried peas and beans	7·4	4·6	6·3	5·0	4·2	4·6	4·7	4·8	5·9	3·6	4·5
Soya flour and grits	—	—	0·4	0·5	1·4	1·7	1·1	0·5	0·7	0·4	0·6
Edible nuts	2·2	2·3	0·8	0·6	0·4	0·5	0·5	1·1	1·3	1·4	1·8
Total	9·6	6·9	7·5	6·1	6·0	6·8	6·3	6·4	7·9	5·4	6·9
As percentage of pre-war	—	72	78	64	63	71	66	67	82	56	72

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(1) This figure may be subject to revision.

(2) The sugar in home-produced jam is included under sugar and the fruit under fruit and fruit pulp.

... Negligible.

Table I (contd.)

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
IX. *Fruit* (including tomatoes)											
Fresh tomatoes	10·4	8·2	6·9	8·6	8·9	8·2	9·1	10·1	14·7	13·3	15·3
Canned tomatoes	2·0	—	...	2·7	—	—	—	0·2	1·3	1·7	1·7
Tomato puree	—	—	...	0·7	0·3	0·2	0·5	0·4	0·6	1·6	1·5
Fresh citrus fruit	28·5	20·4	4·0	4·7	2·0	7·1	14·8	13·1	20·2	23·8	19·9
Canned citrus fruit	1·8	1·2	—	—	—	—	—	—	(*a*)	(*a*)	(*a*)
Citrus juice (unconc.)	0·4	0·5	0·5	0·6	0·7	0·9	0·7	0·7	0·9	1·3	1·5
Citrus juice (conc.)	—	—	—	0·1	0·5	0·6	0·5	0·5	0·4	0·4	0·4
Other fresh fruit	49·3	38·8	12·6	32·5	26·7	25·2	21·1	37·5	48·6	46·5	44·9
Fruit pulp	5·5	3·4	2·1	4·1	5·2	4·5	5·0	5·0	4·7	5·0	5·2
Other canned fruit	10·2	6·4	1·9	2·9	2·9	0·7	0·1	2·4	4·2	4·6	5·5
Dried fruit	8·0	7·2	7·9	8·5	6·1	9·6	8·1	8·3	7·7	6·9	6·3
Total (fresh equivalent)	141·4	108·0	59·7	94·2	77·9	93·6	90·9	109·8	132·4	133·2	128·6
As percentage of pre-war	—	76	42	67	55	66	64	78	94	94	91
X. *Vegetables*											
Cabbage and greens	46·6	46·5	50·7	57·5	56·4	57·3	55·7	49·7	49·5	55·6	53·5
Lettuce	3·7	3·8	3·5	3·7	3·3	4·1	4·0	4·6	3·7	2·4	2·5
Carrots	9·5	10·9	14·3	16·5	14·8	15·3	15·8	13·4	14·2	13·4	13·2
Fresh legumes	9·3	10·7	10·0	10·9	9·2	11·3	14·3	11·5	6·8	6·5	6·8
Canned legumes and carrots	1·1	1·2	1·4	1·0	—	—	0·5	1·2	(*b*)	(*b*)	(*b*)
Other fresh vegetables	36·4	24·7	28·7	29·5	32·3	36·6	35·9	33·7	36·9	33·4	36·2
Other canned vegetables	0·9	0·7	0·5	0·5	1·1	0·2	0·9	1·7	2·9	3·4	3·4
Total	107·5	98·5	109·1	119·6	117·1	124·8	127·1	115·8	114·0	114·7	115·6
As percentage of pre-war	—	92	101	111	109	116	118	108	106	107	108

(*a*) Included in other canned fruit. (*b*) Included in other canned vegetables. ... Negligible.

Table I (contd.)

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
XI. *Grain Products*											
Flour	194·5	208·6	237·1	226·6	230·2	233·5	240·7	221·8	223·5	233·0	232·0
Barley products	0·7	0·7	0·8	0·6	0·6	0·9	1·3	1·7	1·9	1·4	1·5
Oat products	5·4	5·0	8·0	9·8	10·8	10·1	9·9	8·7	9·0	7·4	7·9
Rye products	0·3	0·1	0·4	0·8	1·2	1·7	1·7	1·3	0·9	0·8	1·1
Breakfast cereals	1·8	1·8	2·2	2·3	2·0	2·1	2·2	2·5	2·9	3·9	3·9
Rice	4·4	6·6	6·4	3·5	2·9	3·2	0·9	0·3	0·2	0·4	1·4
Starch	2·2	1·9	1·7	1·9	1·2	1·3	1·3	1·5	1·7	1·5	2·1
Edible tapioca and sago	0·8	1·1	0·6	0·2	—	—	—	—	0·1	1·8	2·9
Total	210·1	225·8	257·2	245·7	248·9	252·8	258·0	237·8	240·2	250·2	252·8
As percentage of pre-war	—	107	122	117	118	120	123	113	114	119	120
XII. *Beverages*											
Tea	9·3	8·6	8·1	8·2	7·0	7·4	8·2	8·8	8·5	8·0	8·0
Coffee	0·7	1·2	1·2	1·2	1·0	1·2	1·2	1·4	1·6	1·7	1·8
Cocoa	4·7	5·8	5·3	4·6	3·5	4·2	4·3	5·5	5·1	3·5	3·7
Total	14·7	15·6	14·6	14·0	11·5	12·8	13·7	15·7	15·2	13·2	13·5
As percentage of pre-war	—	106	99	95	78	87	93	107	103	90	92

Table II

FOOD SUPPLIES PER HEAD PER ANNUM MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

Summary of Food Group totals from Table I

	Lb. per head per annum										
	Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
Dairy products (excluding butter) (total as milk solids)	38·3	38·2	40·7	48·6	50·0	49·0	49·8	49·4	48·7	49·0	50·6
Meat (including canned meat, bacon and ham) (as edible weight)	109·6	98·8	85·6	89·6	86·4	96·1	86·6	89·9	82·0	73·8	69·8
Fish, poultry and game (edible weight)	32·8	22·7	20·0	20·5	21·6	23·5	27·8	34·3	36·3	37·0	35·4
Eggs and egg products (fresh egg equivalent) ...	24·0	22·4	19·2	21·0	22·1	23·2	26·1	21·9	20·9	21·4	22·0
Oils and fats (visible) (fat content)	45·3	41·2	39·9	39·6	37·9	39·0	37·0	34·7	33·9	38·1	40·6
Sugar and syrups (sugar content)	109·9	77·6	70·9	72·1	71·6	75·7	74·1	79·1	85·0	85·9	91·2
Potatoes	176·0	166·4	188·2	224·9	248·8	274·6	260·2	282·0	284·1	242·1	266·3
Pulses and nuts	9·6	6·9	7·5	6·1	6·0	6·8	6·3	6·4	7·9	5·4	6·9
Fruit (including tomatoes) (fresh equivalent) ...	141·4	108·0	59·7	94·2	77·9	93·6	90·9	109·8	132·4	133·2	128·6
Vegetables	107·5	98·5	109·1	119·6	117·1	124·8	127·1	115·8	114·0	114·7	115·6
Grain products	210·1	225·8	257·2	245·7	248·9	252·8	258·0	237·8	240·2	250·2	252·8
Tea, coffee and cocoa	14·7	15·6	14·6	14·0	11·5	12·8	13·7	15·7	15·2	13·2	13·5

Table III

NUTRIENT EQUIVALENT OF SUPPLIES PER HEAD PER DAY MOVING INTO CIVILIAN CONSUMPTION IN THE UNITED KINGDOM

		Per head per day										
		Pre-war	1940	1941	1942	1943	1944	1945	1946	1947	1948 (provisional)	1948-49 (provisional)
Protein:—												
Animal	g.	42·7	38·3	35·7	40·3	39·8	41·4	42·1	44·3	43·0	41·0	40·7
Vegetable	g.	37·2	40·4	46·7	46·3	45·5	45·7	47·2	46·0	47·7	46·4	47·5
Total	g.	79·9	78·7	82·4	86·6	85·3	87·1	89·3	90·3	90·7	87·4	88·2
Fat from all sources...	g.	130·2	120·7	113·4	118·9	115·3	124·0	116·0	112·0	105·4	107·5	110·0
Carbohydrate	g.	377·0	350·1	367·5	363·8	370·0	386·3	383·2	376·8	391·2	394·1	408·8
Calcium	mg.	693	677	698	838	1,032	1,039	1,047	1,078	1,190	1,106	1,216
Iron	mg.	12·4	12·7	12·9	15·5	16·0	16·2	14·6	17·1	16·6	15·7	15·8
Vitamin A	i.u.	3,997	3,685	3,604	3,795	3,565	3,779	3,771	3,727	3,840	3,915	3,920
Ascorbic acid	mg.	96	86	81	97	97	106	107	107	112	111	113
Vitamin B1	mg.	1·2	1·3	1·5	1·7	1·9	2·0	1·8	1·9	1·8	1·8	1·8
Riboflavin	mg.	1·6	1·6	1·6	2·0	2·0	2·1	1·8	2·0	2·0	1·9	2·0
Nicotinic acid	mg.	13·4	13·6	13·0	14·0	14·6	16·0	14·8	17·0	14·9	14·2	14·3
Energy value—Calories		3,000	2,800	2,820	2,870	2,860	3,010	2,930	2,880	2,880	2,890	2,980

Table IV

ESTIMATED DAILY NUTRIENT REQUIREMENTS(¹) PER HEAD

		Calories	Protein	Calcium	Iron	Vitamin A	Vitamin B1	Ribo-flavin	Nicotinic Acid	Ascorbic Acid
			g.	mg.	mg.	i.u.	mg.	mg.	mg.	mg.
Children ...	Under 1 year	100/Kg.	3·5/Kg.	1,000	6	1,500	0·4	0·6	4	30
	1–3 years	1,200	40	1,000	7	2,000	0·6	0·9	6	35
	4–6 years	1,600	50	1,000	8	2,500	0·8	1·2	8	50
	7–9 years	2,000	60	1,000	10	3,500	1·0	1·5	10	60
	10–12 years	2,500	70	1,200	12	4,500	1·2	1·8	12	75
Girls	13–15 years	2,600	80	1,300	15	5,000	1·3	2·0	13	80
	16–20 years	2,400	75	1,000	15	5,000	1·2	1·8	12	80
Boys	13–15 years	3,200	85	1,400	15	5,000	1·5	2·0	15	90
	16–20 years	3,800	100	1,400	15	6,000	1·8	2·5	18	100
Women ...	21 years and over. Moderately active ...	2,500	60	800	12	5,000	1·2	1·6	12	70
	Pregnant	2,500	85	1,500	15	6,000	1·8	2·5	18	100
	Nursing	3,000	100	2,000	15	8,000	2·0	3·0	20	150
Men	21 years and over. Moderately active ...	3,000	70	800	12	5,000	1·5	2·0	15	75
Weighted average requirement(²) based on the above for the population of the United Kingdom:—										
	1934–38 average	2,590	66	920	12	4,680	1·3	1·7	13	71
	1948...	2,560	65	910	12	4,650	1·3	1·7	13	71

(¹) United States National Research Council Recommended Dietary Allowances, 1945.

(²) Adults other than expectant and nursing mothers have been classified as moderately active.

APPENDIX

The Nature of the Averages

1. Cmd. 7203 drew attention to certain aspects of the data, the interpretation of which had raised questions in the minds of readers. It may be useful to add some further brief comment on other points of interest in reading the figures.

2. Paragraph 31 of the original report stated: " The statistical data from which the estimates of commodity supplies moving into civilian consumption were derived, cover virtually all supplies and include food bought for household use, food used in catering establishments (hotels, restaurants, canteens, etc.) and quantities used for food manufacture (e.g., flour, fat and sugar for biscuits). They also take into account food produced by self-suppliers for their own use (e.g., milk consumed on farms, eggs produced by domestic poultry keepers, fruit and vegetables produced in yards, gardens and allotments). Other sources of food supply (e.g., rabbits and game) have also been taken into account." It follows that flour consumption, for example, measures the consumption of flour for all food purposes, whether eaten as bread, cake, biscuits or any composite food containing flour. The consumption of some composite foods can be directly measured as for example sweetened condensed milk. In those cases an allowance is made to avoid the double-counting of any sugar they may contain. Most composite foods, however, are measured in terms of their ingredients and not in terms of final products.

3. In this and previous reports the supplies of food are described as " moving into civilian consumption ". The reason is that the figures measure as nearly as possible the supplies going into retail shops. It follows for this and other reasons that estimates for periods of less than twelve months would be less accurate. No allowance is made for wastage in the retail shops or in the home and no attempt is made to discover what the consumer does with the food after it is bought. In calculating nutrient intake from the supply figures, however, the factors used allow for the inevitable losses (such as the peeling of potatoes) involved in the preparation of the food for the table.

4. From time to time figures have been given of the calorie equivalent of the rations of the non-priority adult consumer. It is important to realise that there is no simple or direct relationship between such a figure (which measures in calories an entitlement at a point of time) and the national average intake over a period of time. The non-priority adult is only one of many kinds of consumer and rations change from time to time. It is therefore incorrect to subtract a calorie entitlement from the national average daily intake and to say that the difference represents the calories derived from unrationed foods.

5. The meaning of the averages given in the tables was discussed in the previous reports. They represent not what any particular individual eats but what the total population is eating on the average. The average thus includes at one end of the scale the intake of the newborn infant which may be as low as 300 calories, and at the other the heavy worker with 4,500 calories. A family of four people for example, husband, wife and two children whose consumption measured in calories might be respectively 3,500, 2,500, 1,600 and 1,200 would have an average intake per head of 2,200. The adequacy of the national diet may be assessed by comparing the calorie and nutrient content of the food supply with the calculated physiological requirements. Table III summarises the calorie and nutrient equivalents of food supplies per head. Table IV shows the calculated requirements per head. In comparing these two tables it should be remembered that the estimates in Table III do not allow for wastage at the retail stage and in the household.

6. The convenience of the calorie as a common denominator for the measurement in one figure of the food eaten by the consumer has led perhaps to an over emphasis of its importance. There are many other ways in which a diet can be measured, and the most important are shown in Table III of the Appendix. From these it can be seen that the national diet is deficient in some of those foods such as fats, meat and sugar which made for variety and palatability before the war. These have in part been made up, so far as calories are concerned by flour and potatoes. The diet though adequate may thus lack variety, but even here, it is important to remember that the nature of averages conceals an important change that has taken place. The effect of rationing, price control and the redistribution of income has been to raise the standard of food consumption of a considerable part of the population. This is not inconsistent with the slight fall in the national average calorie level.

Nutrient Factors

7. The factors used for the conversion of food supplies per head into terms of nutrients are derived mainly from those compiled by the Medical Research Council, War Memorandum No. 14. Since that date for purposes of international comparison the Food and Agriculture Organisation of the United Nations has reviewed the differences in the food tables in use in this and other countries and has reported that " The two major systems for reporting

carbohydrates and two or more procedures for computing calories, with various combinations of these, lead to confusion". The Food and Agriculture Organisation has now compiled a set of food composition tables for international use (N.49/Tech/9, F.A.O. 6th June 1949) and the calorie factors in this table have been applied to some of the British data. Preliminary comparisons show that the average daily calorie value of British food supplies is increased by between 1 per cent. and 2 per cent. if these new factors are used instead of those previously adopted in these reports. Further comparisons of the tables will be made.

Estimated Daily Nutrient Requirements (*Table IV*)

8. The adequacy of the national diet may be assessed by comparison of the calorie and nutrient content of the total food supply with the corresponding calculated requirements. The calculated requirements expressed per head of the population are shown in Table IV. These are intake requirements and represent the allowance of calories and other nutrients required in the food eaten daily. The nutrient equivalents of supplies shown in Table III are estimated at the retail stage of distribution. Thus, there is an inevitable gap between the estimates shown in Tables III and IV.

9. It is difficult to be dogmatic about the vitamin estimates and a note of explanation is required for both vitamin A and ascorbic acid. There are still important differences in the methods used for assessing the vitamin A potency of foodstuffs and human vitamin A requirements and the figures shown in Tables III and IV are not strictly comparable. In order to make them comparable it is necessary to adjust the requirement figures. Such adjustments reduce the requirements from the 4,680 and 4,650 i.u. shown in Table IV to 2,600 and 2,580 i.u. respectively. The ascorbic acid figures in Table III make no allowances for losses of the vitamin in storage and cooking; these would be substantial.

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